

Patent Abstracts of Japan

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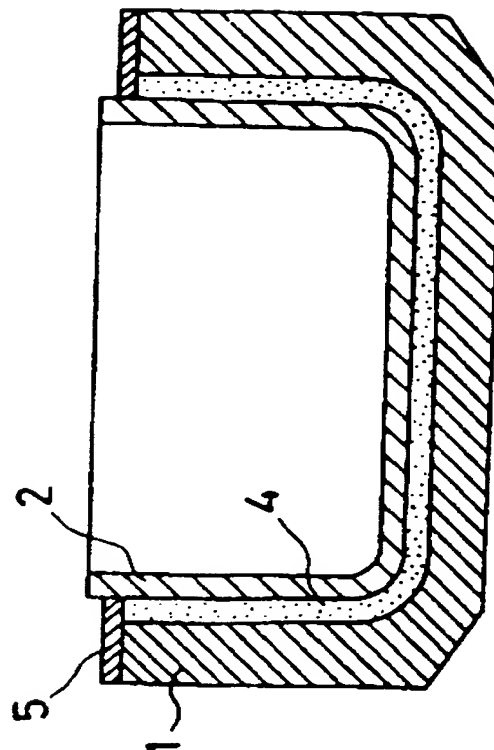
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TITLE : MELTING CRUCIBLE DEVICE FOR
PULLING UP SINGLE CRYSTAL



ABSTRACT : PURPOSE: To prevent the inside of the graphite crucible of the titled melting crucible device from being silicified, being oxidized or sticking to the quartz crucible fixed in the graphite crucible by interposing a separating layer between the crucibles.

CONSTITUTION: A separating layer 4 of 5mm thickness made of powdered silicon carbide is interposed between a graphite crucible 1 and a quartz glass crucible 2 fixed in the crucible 1. Polycrystalline Si is filled into the crucible 2 and melted at 1,450°C, and a single crystal is pulled up from the melt with a seed crystal and cooled. Even after repeating the operations twice, the crucible 2 undergoes no deformation and no reaction. It is preferable that said silicon carbide powder is as pure as possible so as to prevent from unfavorable influence on an Si single crystal. The preferred thickness of the layer 4 is 3~10mm. In the figure, a symbol 5 is a ringlike plate.

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